

Listing of Claims

The status of the claims in the present application, presented in numerical order:

1-9. (Canceled)

10. (Currently Amended) A fluid flow engine comprising
a central housing part in which a turbine shaft is mounted,
said housing part having
a turbine side and
a compressor side and being integrally molded as part of a turbine
housing on the turbine side and as part of a compressor housing on the compressor
side,
wherein a turbine inlet connection is arranged tangentially to the turbine shaft on
the central housing part on the turbine side,
a turbine discharge connection is arranged axially on the turbine housing,
a compressor outlet connection is arranged tangentially on the central housing
part on the compressor side, and
a compressor inlet connection is arranged axially on the compressor housing;
and
wherein a cover is provided on the compressor side or on the turbine side or on
both, and
the cover is constructed as part of the housing, and
a spiral channel for the turbine side or for the compressor side or for both is
provided in the central housing part, said spiral channel closed over by a respective one
of said covers,
wherein the spiral channel is formed exclusively in the central housing part,
wherein said cover in an area adjacent to its respective spiral channel is
constructed to be flat, and
wherein said turbine inlet connection or said compressor outlet connection or
both join tangentially to said spiral channel, and

wherein each cover has an essentially planar construction facing the central housing part.

11. (Previously Presented) A fluid flow engine as claimed in claim 10, wherein said fluid flow engine is a turbocompressor which produces a mass flow.

12. (Canceled) A fluid flow engine as claimed in claim 10, wherein each cover has an essentially planar construction facing the central housing part.

13. (Original) A fluid flow engine as claimed in claim 10, wherein both spiral channels are formed by parts of the central housing part and the cover.

14. (Currently Amended) A fluid flow engine comprising as claimed in claim 10

a central housing part in which a turbine shaft is mounted,

said housing part having

a turbine side and

a compressor side and being integrally molded as part of a turbine

housing on the turbine side and as part of a compressor housing on the compressor side,

wherein a turbine inlet connection is arranged tangentially to the turbine shaft on the central housing part on the turbine side,

a turbine discharge connection is arranged axially on the turbine housing,

a compressor outlet connection is arranged tangentially on the central housing part on the compressor side, and

a compressor inlet connection is arranged axially on the compressor housing;

and

wherein a cover is provided on the compressor side or on the turbine side or on both, and

the cover is constructed as part of the housing, and

a spiral channel for the turbine side or for the compressor side or for both is provided in the central housing part, said spiral channel closed over by a respective one of said covers,

wherein the spiral channel is formed exclusively in the central housing part,

wherein said cover in an area adjacent to its respective spiral channel is constructed to be flat,

wherein said turbine inlet connection or said compressor outlet connection or both join tangentially to said spiral channel,

wherein the spiral channel has a maximum depth in the direction of the turbine shaft,

wherein said spiral channel is oblong in cross section, said oblong spiral channel cross section wider in a radial direction compared to an axial depth of said cross section taken in an axial direction, directions taken relative to said turbine shaft,

wherein for a given spiral channel cross section area, the axial depth of the oblong spiral channel into the housing part is reduced relative to a non-oblong spiral channel due to radial widening of said oblong spiral channel cross section,

wherein the housing part can thereby be axially shortened by use of said oblong spiral channel.

15. (Original) A fluid flow engine as claimed in claim 14, wherein the spiral channels can be arranged in any desired rotational position in relation to one another around the housing circumference owing to their specific maximum depth, so that the tangential connections can be positioned at any angle relative to one another.

16. (Original) A fluid flow engine as claimed in claim 10, wherein at least one connection is angled and extends parallel to the turbine shaft.

17. (Original) A fluid flow engine as claimed in claim 16, wherein the tangential connections are arranged at a variable angle to the axis of the turbine shaft.

18. (Original) A fluid flow engine as claimed in claim 10, wherein the tangential connections are arranged on the cover of the turbine side.

19. (Original) A fluid flow engine as claimed in claim 10, wherein the tangential connections are arranged on the cover of the compressor side.

20. (Original) A fluid flow engine as claimed in claim 10, wherein the tangential connections are arranged on the cover of the turbine side and on the cover of the compressor side.

21. (Canceled) A fluid flow engine as claimed in claim 10, wherein a parting plane is situated essentially centrally in the cross section of the spiral channel between the covers and the central housing part.

22. (Currently Amended) A fluid flow engine as claimed in claim 10, wherein a spiral channel is provided entirely in the housing part for the turbine side, wherein a spiral channel is provided entirely in said housing part for the compressor side,

wherein a cover is provide provided on said compressor side and a cover is provided on said turbine side, said covers closing over respective ones of said spiral channels,

wherein each cover is constructed to be substantially planar and flat at a side abutting the housing part and closing over said spiral channels,

wherein said turbine inlet connection joins tangentially to said turbine side spiral channel, and

wherein said compressor outlet connection joins tangentially to said compressor side spiral channel.